ATTORNEY DOCKET: 58777.000008

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Masayuki YABUTA et al. Group Art Unit: **Application Number:** Examiner: To Be Assigned 10/030,452 January 10, 2002 Filed:

> METHODS FOR REDUCING THE FORMATION OF BY-PRODUCTS IN THE PRODUCTION OF RECOMBINANT POLYPEPTIDES

INFORMATION DISCLOSURE STATEMEN

MAY 1 3 2002 TECH CENTER 1600/2000

RIDEMARIUM States -Patent and Trademark Office Washington, D.C. 20231

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, and in compliance with the duty of disclosure set forth in 37 C.F.R. § 1.56, applicants are submitting herewith copies of the references listed on the attached Form PTO/SB/08A for consideration and to be made of record herein by the U.S. Patent and Trademark Office in the above-captioned application.

For each foreign language document for which no translation is available, a concise explanation of the relevance of the document is included in the specification in accordance with 37 C.F.R. § 1.98(a)(3), or the document was cited by the Japanese Examiner in the Search Report of the corresponding application and relevance is indicated on the enclosed copy of the Search Report.

Consideration of the foregoing plus the prompt return of a copy of the enclosed Form PTO/SB/08A with the Examiner's initials in the left column in accordance with MPEP 609 are respectfully requested.

In accordance with 37 C.F.R. § 1.97(b), this Information Disclosure Statement is believed to be submitted prior to issuance of a first Office Action. Therefore, it is respectfully submitted that no fee is required for consideration of this information. However, in the event any fee is deemed necessary, the Commissioner is authorized to charge the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

HUNTON & WILLIAMS

Dated: May 10, 2002

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Substitute for form 1449A/PTO				Complete if Known			
				Application Number	10/030,452		
INFO	PRMATION	DIS	CLOSURE	Filing Date	January 10, 2002		
STATEMENT BY APPLICANT			PPLICANT	First Named Inventor	Masayuki YABUTA et al.		
				Group Art Unit	1646		
(use as many sheets as necessary)				Examiner Name	To Be Assigned		
Sheet	1	of	2	Attorney Docket Number	58777.000008		

			U.S. PATENT DOCUM	MENTS	
Examiner Initials	Cite No.1	U.S. Patent Document Kind Code² Number (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
)C9	U1	4,987,070	Magota et al.	01/22/91	
	U2	5,599,690	Fenton et al.	02/04/97	
34	U3	5,622,845	Brunner et al.	04/22/97	
254	U4	5,698,418	Brunner et al.	12/16/97	
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FOREIGN PATENT DOCUMENTS								
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Examiner Initials*	Cite No.1	Office ³	Number:	ind Code ⁵ <i>if known</i>)	or Applicant of Cited Document			
	F1	JP	61119189		Mizumoto et al	06/06/86		
	F2	JP	62044198		Hanada	02/26/87		
	F3	EP	0683233	A2	Shinobu et al	11/22/95		
	F4	EP	0164273	A2	Matsuo et al	12/11/85		
	F5	JP	687788			1/13/89		
	F6	JP	2879063			6/27/91		
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Examiner Signature	Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known 10/030,452 **Application Number** Filing Date January 10, 2002 Masayuki YABUTA et al First Named Inventor Group Art Unit 1646 **Examiner Name** To Be Assigned

of 2 Attorney Docket Number 58777.000008 Sheet

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9		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	., 1
Examiner Gritials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	FNTER
	P1	TSAI, Larry B. et al., "Control of Misincorporation of <i>De Novo</i> Synthesized Norleucine into Recombinant Interleukin-2 in <i>E. Coli</i> ," <i>Biochemical and Biophysical Communications</i> , 156(2) :733-739 (1988).	
	P2	BOGOSIAN, George, "Biosynthesis and Incorporation into Protein of Norleucine by Escherichia coli," The Journal of Biological Chemistry, 264(1):531-539 (1989).	TECH
	P3	APOSTOL, Izydor, et al., "Incorporation of Norvaline at Leucine Positions in Recombinant Humah Hemoglobin Expressed in Escherichia coli," The Journal of Biological Chemistry, 272(46):28980-28988 (1997).	CENT
	P4	KANGAWA, Kenji, et al., "Purification and Complete Amino Acid Sequence of α-Human Atrial Natriuretic Polypeptide (α-hANP)," <i>Biochemical and Biophysical Research Communications</i> , 118(1):131-139 (1984).	田
	P5	MASAKI, Takeharu: et al., "Studies on a New Proteolytic Enzyme from Achromobacter Lyticus M4971 II. Specificity and Inhibition Studies of Achromobacter Protease 1," Biochimica et Biophysica Acta, 660:51-55 (1981).	600/2990
	P6	NEIDHARDT, Frederick C., et al., "Chemical Composition of Escherichia coli," Escherichia coli and Salmonella Cellular and Molecular Biology, Vol. I, pp. 13-16, ASM Press, Washington, DC (1996).	S
	P7	TWIGG, Andrea J., et al., "Trans-Complementable Copy-Number Mutants of Plasmid ColE1," <i>Nature</i> , 283 :216-218 (1980).	
	P8	KREDICH, Nicholas M., "Biosynthesis of Cysteine," Escherichia coli and Salmonella Cellular and Molecular Biology, Vol. I, pp.514-527, ASM Press, Washington, DC (1996).	
	P9	VOET, Donald et al., Biochemistry, Vol. 2, Second Edition, Tokyo Kagaku Dojin, pp. 869-870 (1988).	
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Examiner	Date	
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